



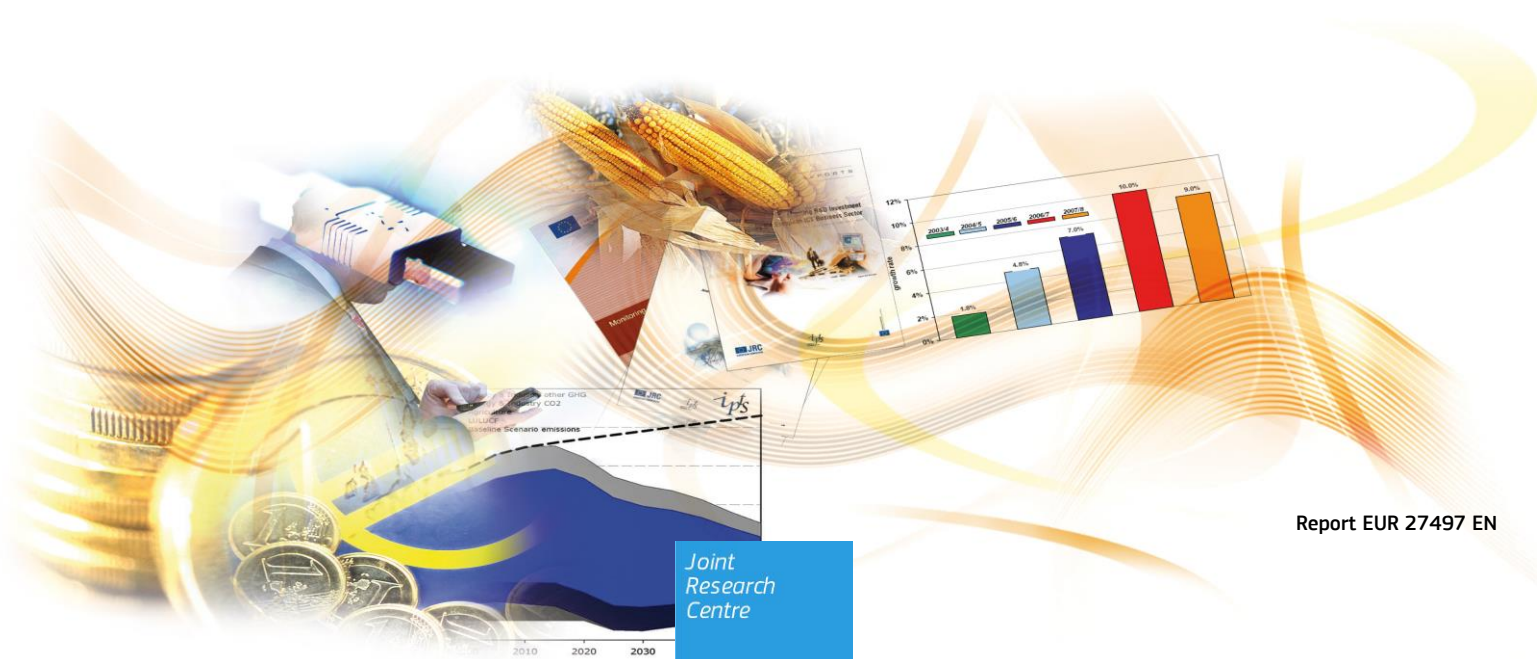
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Abstract

In the frame of the Stairway to Excellence project, complex country analysis was performed for the EU MS that joined the EU since 2004, with the objective to assess and corroborate all the qualitative and quantitative data in drawing national/regional FP7 participation patterns, understand the push-pull factors for FP7/H2020 participation and the factors affecting the capacity to absorb cohesion policy funds. This report articulates analysis on selected aspects and country-tailored policy suggestions aiming to tackle the weaknesses identified in the analysis.

The report complements the complex qualitative/ quantitative analysis performed by the IPTS/KfG/S2E team. In order to avoid duplication and cover all the elements required for a sound analysis, the report builds on analytical framework developed by IPTS.

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EXECUTIVE SUMMARY

Cyprus joined the European Union in 2004. At that time, the country was enjoying stable economic conditions and a booming financial and banking sector¹. In parallel, the academic and scientific sector was continuously developing in an effort to create a more solid research and innovation system that could primarily support the educational needs of the country.

In 2007, Cyprus started to participate in SF (Structural Funds). In order to be successful, Cyprus reorganised its R&I (Research & Innovation) governance system and created new structures and administrative and implementation bodies. The National Research and Innovation Council (NRIC) took the full political responsibility of the R&I policy. The Cyprus Scientific Council (CSC) acted as an advisory body to NRIC. However, both of them were quite inactive during recent years and had little influence in policy design as concluded by the interviews performed by the author.

The Directorate General for European Programmes, Coordination and Development (DGEPCD), a governmental department, became responsible for national development planning. The Research Promotion Foundation (RPF) was assigned the task of designing and implementing research and innovation programmes. The innovation related responsibilities were mainly attributed to RPF and to the Ministry of Energy, Commerce, Industry and Tourism.

During 2007-2013 the academic and research organisations have proven very active relating to participating in FP7 (Framework Programme 7) call for tenders. Cyprus is one of the most successful countries concerning return on investment through participation in FP7 (as shown in Figure 2 and Figure 3). This performance seems to continue today through the good ranking of Cypriot organisations in H2020 (Horizon2020) programmes like “Teaming”.

It is evident that for the new programming period Cyprus needs to work on various dimensions. The overall efforts and investments concerning the academic and scientific infrastructures and the successes in the European Framework Programmes need to be accompanied by a more efficient governance structure. Synergies between ESIF (European Structural & Investment Funds) and H2020 projects have already started to be initiated and there are already several good examples of co-financed projects.

In addition, concerning ESIF, the application of the smart specialisation strategy priorities and conditionality terms will lead to a wider mobilisation of funds in favour of innovation. To achieve such an effect, strategies need to be carefully designed and operated in order to obtain the maximum coordination among the various stakeholders like related ministries (e.g. Agriculture, Commerce), to obtain the maximum use of the intermediary support structures and to facilitate the production of internationally competitive new products.

¹ Since 2004 the Gross Value Added (GVA) of the sector of financial and insurance activities is constantly increasing both as percentage of Gross Domestic Product (GDP) and as a percentage of total based on statistics provided by Eurostat (Gross value added and income by A*10 industry breakdowns, based on NACE Rev. 2 classification).

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1 INTRODUCTION

Background of Stairway to excellence project

The European Commission Framework Programme (FP) for research and technology development has been vital in the development of European knowledge generation. However, there is considerable disparity across EU countries and regions in terms of FP participation and innovation performance.

Horizon 2020 will continue to provide funding on the basis of excellence, regardless of geographical location. However, it will also introduce novel measures for "spreading excellence and widening participation" by targeting low Research & Innovation (R&I) performing countries - most of whom are eligible for innovation funding under Cohesion Policy for the period 2014-2020.

In addition, the new regulations for ESIF aim to use funds more effectively to build regional/national excellence and capacities. By doing so, the key funding sources (ESIF and Horizon 2020) can complement one another along the entire innovation process.

Objective of S2E

The Stairway to Excellence (S2E) project is centred on the provision of support to enhance the value of the key European Union (EU) funding sources for research, development and innovation: European Structural and Investment Funds and Horizon 2020 but also the Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME), Erasmus+, Creative Europe, European Union Programme for Employment and Social Innovation (EaSI) and the digital services part of the Connecting Europe Facility by actively promoting their combination. The project has two main objectives, namely:

- Providing of assistance to regions and countries that joined the EU since 2004 in closing the innovation gap, in order to promote excellence in all regions and EU countries;
- Stimulating the early and effective implementation of national and regional Smart Specialisation Strategies.

Main purpose of the document

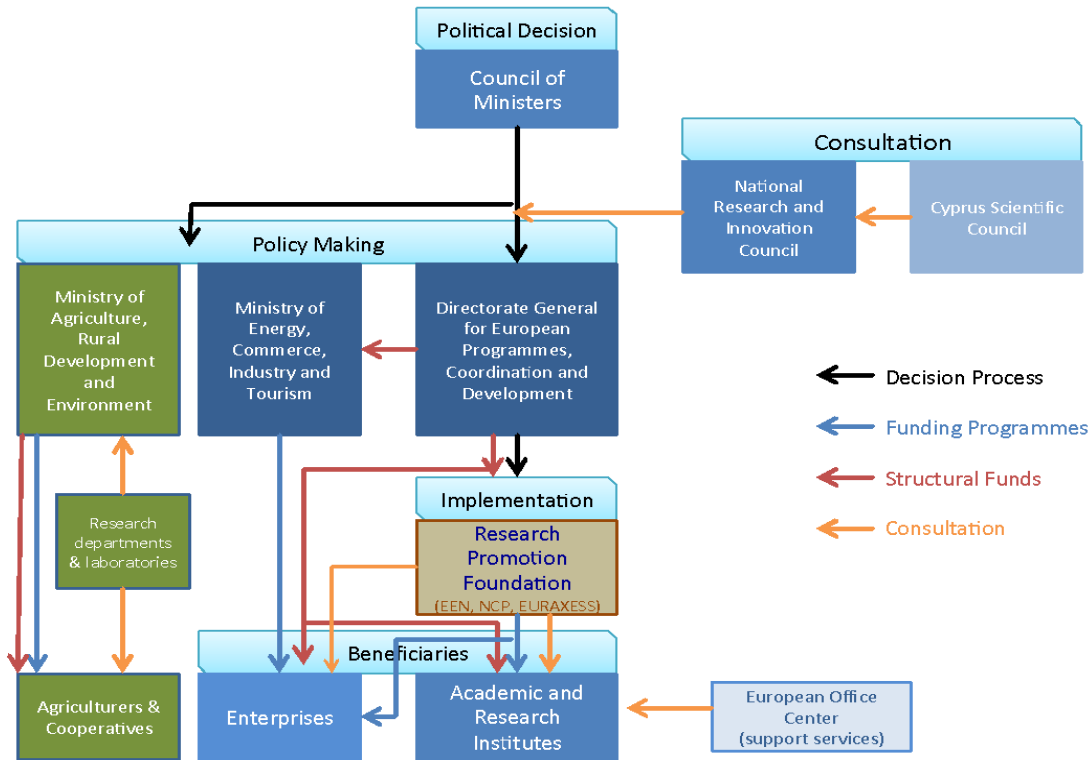
In the frame of the project, complex country analysis is performed for all 13 EU MS with the objective to assess and corroborate all the qualitative and quantitative data in drawing national/regional FP7 participation patterns, understand the push-pull factors for FP7 participation and the factors affecting the capacity to absorb cohesion policy funds. This report presents analysis on selected aspects and country-tailored policy suggestions aiming to tackle the weaknesses identified in the analysis.

The report complements the complex qualitative/quantitative analysis performed by the IPTS/KfG/S2E team. In order to avoid duplication and cover all the elements required for a sound analysis, the report builds on the analytical framework developed by IPTS.

2 QUALITY OF THE GOVERNANCE

Cyprus is a single region and policy is designed and implemented centrally at the national level. Local authorities, namely districts, municipalities and communities rarely play a role in shaping RTDI (Research, Technology Development & Innovation) policies. The structure in Figure 1 of the national R&I system of Cyprus illustrates that the system is under the political responsibility of the **National Research and Innovation Council (NRIC)**. The Council consists of six cabinet ministers (Finance, Energy-Commerce-Industry and Tourism, Education and Culture, Transport and Public Works, Agricultural-Natural Resources and Environment and Health). It is the highest body in the hierarchy, with the exclusive task of formulating a long term R&D (Research & Development) strategy. It is chaired by the President of the Republic of Cyprus and advises the Government on policy issues. In reality, the National Research and Innovation Council have only met once since the date of incorporation in 2007, without taking any policy decisions.

Figure 1 – Structure of the R&I system in Cyprus



Source: Modified and updated by the author based on the relevant scheme of the European Commission, Joint Research Centre – Institute for Prospective Technologies Studies (JRC-IPTS) (2014), ERAWATCH Country Reports 2013: Cyprus

The Cyprus Scientific Council (CSC) has 19 members, all internationally recognized scientists, and acts as an advisory body to the NRIC. The large number of members of the Cyprus Scientific Council (19), combined with their increased professional obligations did not allow meetings with adequate participation or quorum or the possibility of taking influential decisions during the last years. The Council has met several times since the date of incorporation, however, it was not possible to make important decisions (INNOVATE CYPRUS, 2014)².

The **Directorate General for European Programmes, Coordination and Development (DGEPCD)** is responsible for national development planning. It is an independent organisation with the status of a ministry headed by a Director General. It is the authority with the task to implement the EU Cohesion Policy in Cyprus and the allocation of SF. The role of the DGEPCD (ex. Planning Bureau) was and still is very critical. It is the main administrative arm for mobilizing and monitoring the functioning of the structure of the system. It is actually the body that designs most of the policy orientations including the policy design of the structural funds, the smart specialization strategy and the policy coordination of the RTDI system.

DGEPCD collaborates with the ministry of Energy, Commerce, Industry and Tourism in the areas of innovation in SMEs and the promotion of relevant calls for tender. **The Ministry of Energy, Commerce, Industry and Tourism, which is supervising** (among others):

- The management of two pillars of the EU Competitiveness and Innovation Framework programme 2007-2013 (CIP) namely, 1. Information and Communication Technologies (ICT) Policy Support, 2. Intelligent Energy Europe). Entrepreneurship and Innovation was managed by RPF.

² The same conclusion emerged from the interviews.

- The management of the EU Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME) 2014 -2020 supporting SMEs in the following areas: 1. Better access to finance for SMEs, 2. Access to markets, 3. Supporting entrepreneurs, 4. More favourable conditions for business creation and growth).
- The Technology Department supervising activities such as (among others) the design of measures supporting business innovation for the period 2014-2020, supporting the creation of the Platform "MANUFUTURE- Cy" for Future Industrial Technologies, and activities for the establishment of an Innovation Platform in Cyprus.
- The Industrial Development Service, with key responsibilities to strengthen and develop the processing industry and SMEs and the introduction of know-how for the creation of new units for the production of new high value added technology and products.
- The Registrar of Companies and Official Receiver department that supervises Intellectual Property services and the National Patent Office in Cyprus.
- The Energy Institute of Cyprus in that also hosts the National Contact Point for the programme «Intelligent Energy Europe» of CIP 2007-2013. This institute will become more critical for R&I issues for Cyprus due to the effort of the country in developing technologies for alternative energy sources and dependence (8.5% of the energy needs are covered by alternative sources today).

Research and Innovation policy is implemented almost solely by the **Research Promotion Foundation (RPF)**, which is assigned the task of designing and implementing research and innovation programmes in cooperation with **DGEPD**. RPF manages competitive funding by launching calls for proposals. RPF is the main implementation mechanism for the absorption of SF funds in the fields of RTDI. It is also the main actor for the information provision training and networking of the local beneficiaries relating to FP7 and now H2020. The Research Promotion Foundation has received criticism from agents and organised groups of the national research and innovation system on several issues over the last five years including: the adoption of extensive, time consuming and bureaucratic procedures regarding the management and monitoring of research programmes and projects; frictions with the research community or the absence of fixed mechanisms for monitoring and evaluating the programmes. Due to the absence of a structured procedure for the development of the National Strategy and RTDI Policy, the Foundation has occasionally been the 'brain' influencing the design of the SF policy on RTDI. In addition, participation in FP7/H2020 programmes is mainly promoted now by RPF which is also the NCP for H2020 in collaboration with European Office Center (the relevant information network of the Universities). RPF has already initiated unofficial collaboration between H2020 and ESIF, i.e. high ranking proposals in H2020 to be financed by ESIF.

Regarding the Innovation field, the Council of Ministers state clearly that, "the Foundation takes on all the activities related to innovation..." However, the local research and business community was anxious with regard to this due to the parallel development of measures that support business innovation by the Ministry of Energy, Commerce, Industry and Tourism.

Finally, the Ministry of Agriculture, Natural Resources and Environment which supervises four R&I related departments: the Agricultural Research Institute, the Department of Fisheries and Marine Research, part of the Geological Survey (as Geology and geo-environmental matters) and the Environment department (National Contact Point for the programme «Eco-Innovation» pillar of the «Entrepreneurship and Innovation» EU Framework Programme CIP 2007-2013). The Ministry of Agriculture handles a separate budget for rural development, Maritime and fisheries part of which is related to innovation in these fields.

In September 2013, a National Committee for Research, Innovation and Technological Development (NCRITD) was created, composed of scientists from the Cypriot Research and Academic Centres and the Business Sector, with the purpose of reviewing the situation in other member states and proposing a more effective governance structure in Cyprus. The study (INNOVATE CYPRUS, 2014) brought to the surface a series of issues to be tackled at all levels of the RTDI governance system and proposed a series of radical reforms. In theory, the creation and functioning of the current governance structure was found to be generally correct for the time that it was designed (2007). In practice, however, already over the first years after the implementation of the new system, major deficiencies have emerged.

One of the main issues that were addressed by the Committee was that there is a lack of a unique vision of the policy framework. The implementation of a Smart Specialisation Strategy, whose final version has recently been issued, aims to change this situation. But according to the Committee this may occur only

through the reorganization of the governance system, based on the process of entrepreneurial discovery as well as on the correlation between ESIF Programmes and other funding sources, such as Horizon 2020.

It is also apparent that basic tools for the design of the national strategy and policy (i.e. systematic mechanisms that evaluate past policies and measures, analytical studies on scientific and technological prospects ("science and technology foresight")) are not sufficiently developed. This is also the case for institutionalised communication channels concerning a more active participation of key stakeholders (i.e. business community and other individual parts of the public sector).

As stated by the Committee (INNOVATE CYPRUS, 2014) and verified by the interviews with universities and research organisations, some of the shortcomings in the implementation of SF policies relating to RTDI are given below:

1. The design of independent and piecemeal support measures, which target at specific stages of research and development and, do not guarantee any subsequent stages of support and funding of research ideas.
2. The adoption of complicated and time-consuming processes from programme management bodies, which created obstacles and delays in the payment of funds to the beneficiary institutions.
3. The complexity of procedures is particularly visible by the increased requirements for controls arising from the broader context of managing the SF funds, which constitute, during recent years, the main source of public funding of R&I activities in Cyprus.
4. The lack of tools and processes for reviewing policies and related programmes in order to acquire sufficient ideas and reasoning for adjustment, remodelling and improvement of measures where necessary.
5. Lack of experience and expertise of public bodies on management of R&I and relevant measures.

The following SWOT analysis illustrates the characteristics of the system in relation to the governance of SF.

<p>Strengths</p> <ul style="list-style-type: none"> ● New RTDI infrastructures ● Competitive participation in European programmes especially in the areas of ICT ● Good quality of human resources ● Positive behaviour towards international collaboration ● Oversubscription of proposals when calls are made ● Large Academic & Research Community – Private universities ● Centralised structures for information provision, networking, and training 	<p>Weaknesses</p> <ul style="list-style-type: none"> ● At the moment, there is not a specific governance system in place, as the old one does not exist and the new one is not yet ready ● Some of the bodies supposed to design and support the RTDI policy do not really operate (e.g. council) ● There was no focused strategic direction and vision on RDTI ● Unclear positioning of innovation in the policy agenda ● Small number of organisations
<p>Opportunities</p> <ul style="list-style-type: none"> ● Simplification of procedures in terms of bureaucracy for the new Programming Period ● Smart specialization strategy ● Collaboration with H2020 ● Collaboration among Ministries ● Involvement of Ministry of Agriculture 	<p>Threats</p> <ul style="list-style-type: none"> ● Economic crisis ● Limitation of funding ● Limited private investments

3 FACTORS THAT SUPPORT OR LIMIT THE NATIONAL PARTICIPATION IN R&D CALLS FUNDED BY SF/ESIF

Cyprus has an open, free-market, service-based economy with some light manufacturing. Internationally, Cyprus promotes its geographical location as a "bridge" between East and West, along with its educated English-speaking population, moderate local costs, good airline connections, and telecommunications (Violaris & Heide, 2007). However, after more than three decades of unbroken growth, the Cypriot economy entered into turbulence in 2009. On 1 January 2008, the country entered the Eurozone and adopted the Euro as its official currency. The 2012–13 Cypriot financial crisis, part of the wider Eurozone crisis, has dominated the country's economic affairs in recent times.

The government's main focus will be to continue tackling the social and economic consequences of the 2013 crisis. The conditions of Cyprus's EU/International Monetary Fund (IMF) bailout will continue to determine economic policy beyond its expiry in early 2016. The economic adjustment programme for Cyprus covers the period 2013–2016. The European Stability Mechanism (ESM) will provide up to €9B, and IMF is expected to contribute around €1B. Real Gross Domestic Product (GDP) fell by 2.3% in 2014. A further contraction of 0.4% in 2015 is forecasted before a return to growth of 1% in 2016.

Table 1 - Key economic figures

European economic forecast Winter 2015				
Forecast for Cyprus	2013	2014	2015	2016
GDP growth (% , year on year)	-5.4	-2.8	0.4	1.6
Inflation (% , year on year)	0.4	-0.3	0.7	1.2
Unemployment (%)	15.9	16.2	15.8	14.8
Public budget balance (% of GDP)	-4.9	-3.0	-3.0	-1.4
Gross public debt (% of GDP)	102.2	107.5	115.2	111.6
Current account balance (% of GDP)	-1.3	-1.2	-0.6	0.0

Source: European Commission, Directorate-General for Economic and National Affairs (2015). European Economic Forecast: Winter 2015

The success of the economy of Cyprus before 2009 was based on the adoption of a market-oriented economic system, sound macroeconomic policies as well as the existence of a dynamic and flexible entrepreneurship and a highly educated labour force. Moreover, the economy benefited from the close cooperation between the public and private sectors. In the past 30 years, the economy has shifted from agriculture to light manufacturing and services. As stated out in one of the Planning Bureau's reports (Planning Bureau, 2013) **the services sector, including tourism, contributes almost 80% to GDP and employs more than 70% of the labour force**. Industry and construction account for approximately one-fifth of GDP and labour, while agriculture is responsible for 2.1% of GDP and 8.5% of the labour force.

Table 2 - Main fields of Smart Specialisation in Cyprus

Description	Capabilities	Target Markets	EU Priorities
Tourism: sustainable tourism, alternative forms of tourism, digital tourism applications, management and promotion of tourism product	1. Tourism, restaurants & recreation	1. Tourism, restaurants & recreation	1. Sustainable innovation
Energy: renewable forms of energy, solar energy, solar-thermal technology solar-photovoltaic, technologies for solar heating and cooling, energy storage and transfer	1. Energy production and distribution	1. Energy production and distribution	1. Sustainable innovation 2. Sustainable energy & renewables

Agriculture-Food Industry: agricultural and livestock production, agriculture, food security and climate change	1. Agriculture, forestry and fishing	1. Manufacturing & industry 2. Food, beverage & tobacco products	1. Public health & security 2. Food security & safety
Construction Industry: Sustainable Urban Development, Sustainable Construction, Existing Building Stock, Innovate and Intelligent Materials and Reuse of Building Materials, Cultural Heritage	1. Construction	1. Construction	1. Sustainable innovation 2. Eco-innovation
Transportation: Marine, Shipping, Intelligent Transport Systems, road freight	1. Transporting and storage	1. Transporting and storage	1. Sustainable innovation 2. Smart green & integrated transport systems
Health: e-health, prognosis – prevention and treatment of diseases, health pharmaceutical industry	1. ICT	1. Human health & social work activities	1. Digital Agenda 2. e-Health (e.g. healthy ageing)

Source: European Commission, JRC-IPTS (2015), Stairway to Excellence Facts and Figures: Cyprus

During the period 2007-2013 Cyprus has allocated €74.4M (DG for Regional and Urban Policy [DG Regio], 2015) on RTDI related activities from SF 2007-2013 out of around €493M of the Sustainable Development and Competitiveness OP. The following remarks can be made.

- Based on the above figures, a simple calculation states that an average of around €10.6M from SF related to R&I was diffused to the economy annually. Out of this amount around 65% has supported general investments in SMEs and the remaining 35% i.e. €3.7M per year were directed towards activities related to R&D and innovation.
- With an annual GDP of around €19.9B for 2014 and €20.7B for 2009 (Eurostat, 2015)³ it is evident that the above amounts can little affect the national economy. Maybe they could if they are really focused towards very specific directions (smart).
- With a total amount of around €80M per year spent on activities related to R&I, the above figures are still low, however, in times of financial crisis they could play an important role.
- Absorption capacity seems to be satisfactory, however the amounts are small.
- The largest amount of the R&D budget goes to research centres and infrastructures.

The new ESIF financing of the country is around €958M⁴ for the period 2014-2020. This consists of four operational programmes that will start to operate hopefully by summer 2015. The following remarks can be made:

- The smart specialisation strategy is the 'conditionality' for the thematic target 1 on Strengthening Research, Technological Development and Innovation. However, the strategy affects significantly thematic targets 2 (ICT), 3 (SMEs) and 8 (human resources-ESF). This implies that a total budget of around €343M will be influenced (more or less) by the national R&I policy (smart), the governance system, the **short-term** priorities and the maturity level of the policies proposed.
- Based on the national planning it is evident that the ESIF budget related to competitiveness (including RDTI) and human resources **will be heavily spent during the first two years** and

³ The amounts refer to current prices at Purchasing Power Standards (PPS).

⁴ 1. CYPRUS PARTNERSHIP AGREEMENT (source: DGEPCD)

A total amount of €956mIn has been allocated to Cyprus for the Programming Period 2014-2020 from the European Structural and Investment Funds (ESIF), as follows:

Structural Funds, Cohesion Fund and Youth Employment Initiative: €784mIn.

European Agricultural Fund for Rural Development: €132.2 mIn.

European Maritime and Fisheries Fund: €39.7 mIn.

this requires the appropriate governance and absorption capacity by correcting existing deficiencies. A total budget of around €400M needs to be absorbed from ESIF, and out of this at least **€40M** on R&I related measures (thematic objective 1).

- An interrelation with the programmes Rural and Maritime needs to start now to secure synergies.
- The same applies to the design for the Human resources OP.

Strategic guidance is important. For the period 2009–2010 no board of directors existed in RPF. Also for the period 2009–2011 there was no general director at RPF. This is a long period of reduced level of leadership and guidance that affects seriously the performance of policy implementation.

Administration of projects is an issue. One of the major criticisms made by the scientific Community is that the administrative processes followed by RPF are characterised by excessive checks and controls following rigid guidelines. In an ideal world, a scientist receiving a grant should produce a quality publication to justify his or her work to the funding agency. In Cyprus, things often work differently; scientists are requested – often several years after they submitted their proposal, to go through each work package and prove that the research they performed with the grant was exactly what had been stated in the initial proposal. Many scientists have reported a “tick a box” attitude of the RPF staff when it comes to assessing the outcome of projects before authorising final payments. As it was mentioned in the interviews...*no self-respecting scientist can be expected to produce results that offer a “perfect fit” to their initial grant proposal. Science is a fast moving world with a continuous flow of new publications that will often seriously derail an initial research proposal, create the need to constantly re-assess the trajectory of experimental plan and often re-formulate work packages to respond to fast moving and cutting edge fields...*. Thus, it is proposed that RPF modernises its practices in order for beneficiaries to be efficiently steered on paths of improvement and final approvals.

H2020 projects finance R&D activities for universities at 100%. For innovation it is different. Private organisations have to pay 30%. The issue in Cyprus is that private universities are also considered “private companies”. Thus, all private universities created non-profit organisations to host research projects but this also brought some new problems. When private universities use the non-profit entity it adds an extra layer of bureaucracy. Private universities are considered as large enterprises relating to R&D. For SF, large companies get funded at 40% for research projects. For private universities this is far too little and thus they cannot participate. In the case that a private University collaborates with SMEs this can go up to 50%. The issue is currently under discussion.

RPF will have new research programmes that will fit in with the RIS3 strategy. What are the extra complications of passing through a non-profit entity? It is just a duplication of efforts, another legal structure, accounts, etc. Also, there is an issue concerning the exploitation of the results from the research. The academics benefit from the research, thus something is transferred to the universities, which are profit-making companies. RPF doesn't like this situation and is trying to see if there are alternatives but at the moment private universities cannot offer any other solutions. All this creates an extra barrier of competition between private and public universities. The private universities are already at a disadvantage because of higher teaching load, administrative responsibilities, infrastructure, etc.

Another substantial problem in Cyprus is the lack of reliable funding by the state due to administrative discontinuities. During the last decade, there have been gaps in financing national SF programmes due to lack of leadership in RPF and the creation of DGEPCD. In addition, delays in evaluations both of proposals and reports led to complaints of delays by both companies and RDTI institutions⁵. The situation became even worse during and after the financial crisis: there has been limited capacity to absorb SF financing for almost three years. Cyprus relies mostly on SF for R&D funding and there are no significant national funds to support the growing R&I infrastructural needs. When funding lowers, then the country loses human capital (brain drain), few new opportunities exist and many ongoing efforts need to be re-started. Currently, RPF is still handling the administration of the majority of RDTI programmes and projects and it seems that there is a serious effort to streamline procedures and overcome deficiencies that cost a lot in time, money and reputation.

⁵ Source: interviews

<p>Factors that support the national participation in R&D calls funded by SF/ESIF</p> <ul style="list-style-type: none"> ● Use of the information and networking instruments ● High quality of advisory services ● Regularity of policy interventions ● Clear leadership and targets ● Availability of information and publicity ● Availability of co-financing ● Mobilisation of the private sector into long term extrovert activities 	<p>Factors that limit the national participation in R&D calls funded by SF/ESIF</p> <ul style="list-style-type: none"> ● Lack of regular policy guidance ● Lack of collaboration between business and academia ● Lack of skills and expertise in proposal drafting ● Different modes of participation for public and private research laboratories and universities. ● Excessive controls over projects
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4 PUSH – PULL FACTORS FOR R&I PERFORMERS TO PARTICIPATE IN FP7/H2020

Cyprus is characterized by relatively low R&D performance concerning R&D expenditure and other related indicators. There are several limiting factors for the implementation of successful RDTI policies. Among them: the small size of the country and its research potential, the relatively recent establishment and development of academic institutes, the narrow research tradition (e.g. ICT), the little interaction between public and private sector on RTDI issues, the limited industrial activity, the traditional structure of national enterprises and the low investment of the private sector in RTDI. However, based on the interviews performed and on literature (RPF & Cyprus University of Technology [CUT], 2015) its participation to FP7 is satisfactory and participation in H2020 might look promising”, In Cyprus the national R&I infrastructures are now better formulated and enter in a more mature stage that can be analysed as a more solid RDTI system.

For the period 2007-2013 the total FP7 funding that accrued to Cyprus was €97.1M while the total structural funds for the same period were €132.3M. Generally, in FP7 Cyprus initially had 3,083 participations, of which only 442 were retained and financed. The low number of retained projects reveals a low overall success rate (14.3%), especially compared to that of the EU average (20.4%). The only theme where Cyprus’ success rate (32.1%) is higher than the EU average (26.8%) is “Science in Society”. However, taking into account the FP7 financial contribution per inhabitant (111.9€/inhabitant) Cyprus’ performance is high compared to both EU13 and EU15 average (17.8€/inhabitant and 95.2€/inhabitant respectively)⁶.

Based on the same source, although among all specific programmes Cooperation gathers the largest amount of FP7 financial contribution (i.e. 48.6%), the total success rate on this programme is low enough (12.7%) compared to the EU average (21.3%). The higher success rate among the Thematic Priorities is that of the Thematic “Transport” that accounts for 23.7%. Certain research areas of high interest emerge when examining the budget of each theme. **Specifically, the ICT gathers 46.6% of the budget**, followed by Security (9.3%) and Environment (8.6%). **Although the Thematic Priority ICT represents almost ¼ of Cyprus’ total funding, its success rate is low and only in two out of 65 projects the Coordinators come from Cyprus.** Other areas, such as Biotechnology, Health, New production technologies and Aeronautics, appear to be weakly represented compared to the total FP7 average.

Concerning the Ideas programme, the efforts made by the Cypriot researchers were successful. In more details, although the submitted proposals of this programme counted only for 5% of the total proposals submitted by Cyprus, the programme represents around 16% of Cyprus’ total funding.

A strong conglomeration is recorded in **Capacities (21.9%) and People (14%) specific programmes, where the Cyprus EU contribution is higher than the EU average (8.5% and 10.7% respectively).** Among Capacities’ Thematic Priorities, “Research for the benefit of SMEs’ plays an important role.

⁶ Source: European Commission, JRC-IPTS (2015), Stairway to Excellence Facts and Figures: Cyprus

Concerning the type of beneficiaries, higher or secondary educational institutes gather more than half of EC contribution (i.e. 51.4%), followed by the private commercial sector, which accounts for 37%. The participation of research organisations in FP7 contribution is extremely low (6.3%), especially when compared with the EU FP7 contribution (26.9%). Table 3 shows the top 10 beneficiaries regarding EC financial contribution granted in FP7.

Table 3 – TOP 10 beneficiaries regarding EC financial contribution granted in FP7

Name	Number of participants	EC Financial contribution € million
University of Cyprus (UCY)	104	30.21
The Cyprus Research and Educational Foundation (CREF CYI)	23	8.27
The Cyprus Foundation for Muscular Dystrophy Research (CING)	9	4.58
Cyprus University of Technology (CUT)	23	4.55
eBOS Technologies Ltd (eBOS)	6	2.74
O.M. Offshore Monitoring Limited (OFFSHORE MONITORING)	4	2.39
Primetel PLC (PRIMETEL)	11	2.26
The Cyprus Institute Limited (CYI)	6	1.91
WLB Limited (WLB)	9	1.76
Hystore Technologies Limited (HYSTORE)	2	1.62

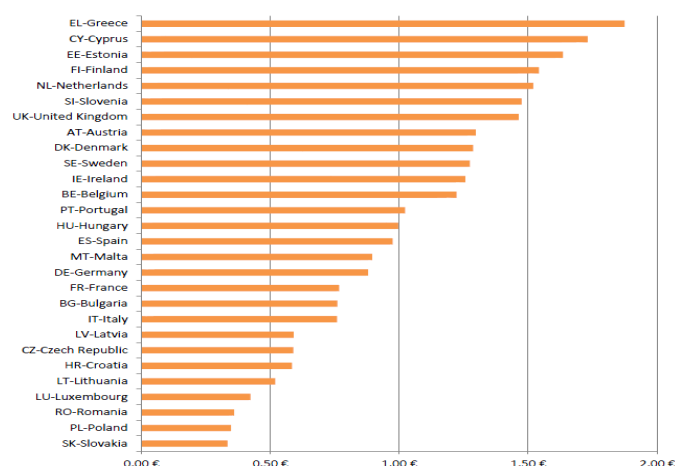
Source: eCORDA, July 2014

University of Cyprus is the big player with more than 50% participation in both FP7 projects and financial contribution. It also is important to be mentioned that University of Cyprus is preparing large investments on infrastructures and human resources for the next years. This is also the case with a number of other private universities.

Cyprus' performance is **higher than the average regarding SMEs participation** in Cooperation programme both in terms of budget and of number of participations and coordination, with the preferred thematic areas being the same with the abovementioned ones (mainly ICT).

In total, regarding the relative "success" of Member States in FP7 by indicating what amount of FP7 funding they receive for every € spent on the FP7 budget, Cyprus' performance is really high (both in absolute figures and per capita).

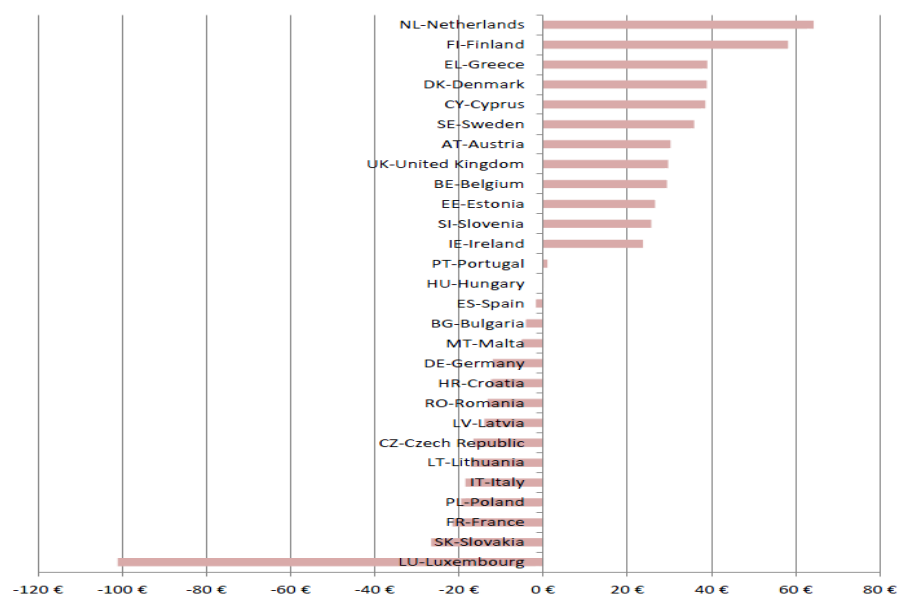
Figure 2– Estimate on income received from FP7 funding for every € spent on FP7 budget (2007 – 2011)



Source: Fisch Peter (2014), A first look at monetary (re-) distribution effects of Framework Programme 7

As seen in the above figure, Cyprus has the second highest return ratio, receiving over €1.50 per € invested. But beyond the absolute figures, it is also worth being mentioned that the group of best performing Member State receives roughly a return per € spent which is four times higher than the one for the group at the end of the scale. Regarding the situation per capita, Figure 3 estimates the net distributional effects of FP7 for each inhabitant of the Member States. As illustrated below, FP7 generated per head of population net gains is above €35 for Cyprus.

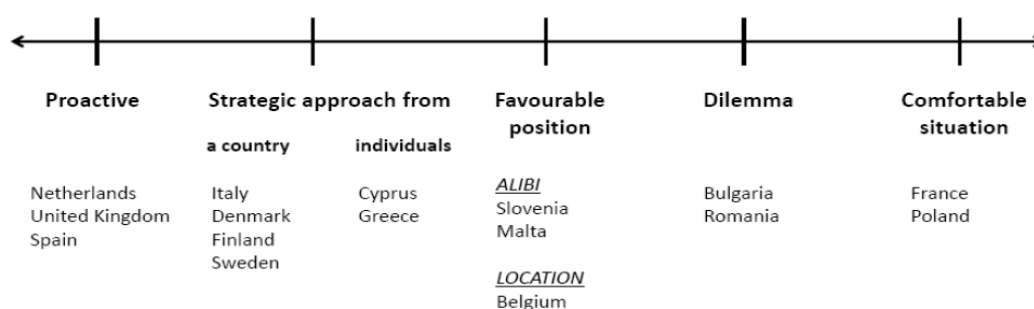
Figure 3 – Estimate on NET distributional effects of FP7 per capita (2007-2014) ("money in- money out")



Source: Fisch Peter (2014), A first look at monetary (re-)distribution effects of Framework Programme 7

Taking into account the behaviour of Cyprus's (potential) participants in front of FP7 calls for tenders, it could be said that their behaviour is based on a strategic approach of some individual organisations.

Figure 4 – Possible attitudes/Situations in front of FP7 calls for tenders



Source: Saublens, C. (2014)

In countries like Cyprus and Greece the performance national RDTI system is largely based on the performance of specific research teams and key individuals. Both countries perform in an outstanding way in areas where huge laboratories and infrastructures are not needed but mainly smart ideas and man-hours, like in the case of ICT.

It is evident from both the smart specialisation strategy and the interviews performed, that the educational and research sector is developing as a main industry for the country. This implies that this industry will be a main driver and 'customer' of the H2020 programmes. However, push factors that were limited in the past (i.e. information on FP7 programmes, information events, technical support for preparing proposals and involvement of academic staff) are being tackled now differently as it is also described in the next chapter. PRF in collaboration with the Universities will tackle the information and support activities together.

It is more than evident that for a country like Cyprus participation in large competitive FP7/H2020 projects will lead to very few projects that will be coordinated by Cypriot RDTI stakeholders. This implies that in many cases Cypriot organisation will be mainly followers and this might limit creativity. On the other hand Cyprus is a traditionally internationalised country with long traditional relations with the UK and other EU countries and an excellent level of English spoken population that makes it easier to write proposals and communicate internationally.

Another area is the participation of the private sector. This is a delicate point to be addressed due to the limited competitive sectors and companies internationally as well as severe restructuring of economy during the last years. In addition, as felt through the interviews, sometimes companies do not feel confident in participating in programmes due to the delays observed in the past concerning participation in national SF projects. In addition, companies have limited information or personnel involved in such activities.

During the previous programming period Cyprus has focused on developing its educational and research system by supporting its knowledge infrastructures. The R&D system is quite new, with good quality of researchers especially in specific fields like ICT. However, the participation performance in H2020 will be enhanced through the more organised work of the NCP. The role of RPF is critical for promoting participation both as a leader of the NCP but also as the organisation that could create larger R&D groups in the areas of national excellence. The performance of Cyprus, as described above, is explained through the following push - pull factors:

Push factors for R&I performers to participate in FP7/H2020	Pull factors for R&I performers to participate in FP7/H2020
<ul style="list-style-type: none"> ● New and eager research teams ● Competitive human resources in specific fields like ICT. ● International behaviour and positive attitude towards international collaborations. ● Perfect level of English spoken population and researchers ● Limited National Funds 	<ul style="list-style-type: none"> ● Lack of specific categories of scientific excellence leads to collaborations – International partnerships ● High quality of advisory services of NCP ● Provision of organised services for proposal preparation ● Fixed terms for the evaluation and implementation of projects ● Demonstration projects providing successful results: target group companies ● Awareness initiatives ● Financing opportunities

5 POLICY INSTRUMENTS FACILITATING THE PARTICIPATION IN (FP7)H2020/(SF) ESIF

There are two structures in Cyprus concerning the facilitation of the participation (in FP) H2020/(SF) ESIF. In both cases, the Research Promotion Foundation plays the major role.

RPF is the National Contact Point in Cyprus, the representative of EEN and of EURAXESS. This implies that RPF is the main distributor of information concerning EU R&I programmes in the country. During the last years a series of training events relating to proposals preparation and evaluation, information about EU programmes and initiatives, financial issues etc. have taken place.

The European Office Cyprus is a non-profit non-governmental organisation and represents 20 organisations today, mainly research and academic institutes. The main purpose of this organisation is the diffusion of information and consultation of the opportunities concerning the European Programmes. However, concerning the national measures information depends on RPF.

Recently, under the new formulation of the Cyprus NCP, both organisations collaborate under the same umbrella.

Information diffusion, proposal support and training seem to be the main targets in order to further increase the quality of future proposals.

6 EVALUATION AND MONITORING MECHANISMS

The evaluation mechanisms cannot be characterised as complex or raising any suspicions. A significant problem according to the interviewees' view was delays in some of the evaluations. Also the overall monitoring of the programmes and the ability to provide feedback was identified as a weak point.

As mentioned before, RPF is the main organization in Cyprus that implements R&D policy. RPF has improved substantially the evaluation process for proposals over the last years. This is a part of the RPF work that has not been criticized negatively by the scientific community. Ever since the RPF started to accept proposals in English (it used to be Greek only), the institution has gained access to a list of referees from the EU as well as other reviewers that have been used for evaluations over the years.

When a proposal is submitted, RPF checks the keywords of the abstract and tries to match with referees in the relevant list. Two evaluators are chosen for each proposal and the process involves the use of a questionnaire including comments and grades. Before sending the proposals to evaluators, RPF does an administrative screening of projects. When the results from the evaluators come back, the two grades are averaged. In the case of a significant difference in the grades, a third reviewer is called into the process. Then, the results are sent to the applicants.

One other issue is the necessity to monitor the quality of the evaluation over time. In that respect evaluators need to be “evaluated” at some point, to ensure that the highest standards of skills are maintained over time.

While the evaluation process is considered to be non-problematic until the point that the grant is awarded, it seems that the scientific community perceives as problematic the period that starts with the negotiations until the final stages of the grant. According to universities’ views there was a slow response time from RPF, with overly rigid and formal procedures, sometimes changes in the interpretation of the rules and the contract terms, and bureaucratic processes to satisfy all the checklists to approve reports were some of the main issues that have been mentioned. However, this is not the view of RPF: ‘Procedures were the appropriate ones based on EC regulations’. According to the interviews, the local scientific community notes that some radical changes in the process will need to take place if policy makers wish to continue to support and improve the island’s scientific and innovation capacity.

For innovation grants financed by SF and directed to industry and SMEs, it is the Ministry of Commerce and Industry that was directly responsible. RPF was not necessarily involved directly. The technical evaluation of the proposals was undertaken by academics in Cyprus. Being a small society, some issues of impartiality have been mentioned, despite the fact that evaluators had to sign declarations on conflict of interest or other issues of non-disclosure. The problem observed is that academic evaluators were not allowed to assign a grade or ranking to the proposals. They were only allowed to express opinions and note comments. After this, the process went forward to a panel that was internal to the Ministry. Companies were requested to make a presentation in front of the panel and the panel finally decided on the grade and ranking of the projects. There are complaints that, in some cases, the panel ignored the advice of the academics and that grants were allocated against the best scientific advice. Because of that the new call for proposals proposed a more strict mechanism, still relying on local evaluators.

The role of consultancy companies is sometimes important due to the fact that calls for proposals are usually complex, and consultants can prove helpful for the preparation of the bids. However, no conflicts of interest have been mentioned.

7 ENHANCING OR LIMITING THE SYNERGIES?

Cyprus is an interesting case of a small country that seems quite capable of combining the two funding mechanisms. R&I infrastructures in the island are new and have not entered into their maturity phase. However, the performance of the country in FP participation in specific fields, like the case of ICT, has been outstanding. RPF has encouraged the participation of local beneficiaries in EU programmes and has encouraged the resubmission of good proposals for SF financing. Of course, the level of financing cannot be the same, however good ideas are encouraged.

In addition, Cyprus is a country that encouraged the participation of foreign beneficiaries (e.g. German organizations) to participate in SF calls in collaboration with local ones. Despite this, problems have sometimes occurred due to the demand of excessive information and documents requesting the justification of the expenses of the foreign partners according to the local administrative system.

Another positive fact is the existence, today, of a unified information system for the provision of information and networking to local beneficiaries. As mentioned before RPF is the National Contact Point in Cyprus and the representative of EEN and of EURAXES. The network of the Cyprus European office is now part of EEN. This implies a more focused and strategic role of EEN for the next years targeting more efficiently to national champions and excellence.

Example 1

There are several examples that prove how H2020 funding can be complementary to SF funds and finally lead to higher funding absorption and better R&I results. Here, we examine the case of Constantinos Deltas⁷ which could be described as a success story for showing how SF/ESIF funds can be combined with H2020 funds. It deals with the creation of the first bio-banking⁸ infrastructure in Cyprus. For creating this infrastructure, they received a €2M SF funding, in 2011. As the funding mainly covered consumables, equipment, software and manpower expenses, there was a big problem regarding physical space (as the University of Cyprus was unable at that moment to cover the project's needs for a proper infrastructure). However, the success of the project, in terms of scientific results, proved to be helpful for applying for the next grant in Horizon 2020. In particular, through a teaming action call which was addressed to countries with low R&I performance (Cyprus is one of them) Deltas' team had the chance to team up with two very prominent and very well-known organisations dealing with bio-banking in Europe in order to upgrade their molecular medicine research centre (created previously through SF) to a centre of excellence and they succeeded. They have already been through the first stage of the procedure and received €460K for writing the business plan and if successful they will receive more funding at the second stage of the procedure to implement their activities.

The above example of "infrastructure grants" is interesting as it highlights a positive action undertaken by the RPF to put the SF to a combined use. However, it should be mentioned that all applicants were asked, after they had been awarded the grant, to reduce their overall budget by 50% or more. The fact that the overall budget was drastically reduced points again to a major weakness of the policy-making environment. Funding, due to the crisis, was highly unreliable.

Example 2

The KIOS Research Centre (<http://www.kios.ucy.ac.cy/>) has been a successful project for which infrastructure funded by SF has led to new opportunities both during the FP7 program and Horizon 2020. The Nicosia-based centre (Research Centre for Intelligent Systems and Networks) illustrates the kind of projects that could be undertaken in Cyprus to combine SF and H2020 funding. Cyprus has a strong competitive advantage when it comes to highly qualified scientific personnel; labour costs are significantly lower than in other core European countries while the quality of the academic personnel remains very high in comparison with its peers (as indicated by the above average absorption of EU research funds). For instance, in the case of KIOS a modest investment would be sufficient to support a small cluster of SMEs to exploit the expertise generated by KIOS. Incidentally, a University of Cyprus PhD student working at the centre won a prestigious award for his research into improving the performance of power distribution systems and potentially lowering electricity costs for consumers (Cyprus Mail, 2013). Applying such expertise could prove to be a viable commercial proposal, one of the many that could be directed to private entrepreneurs establishing new collaborative links with research institutes.

Overall the following factors enhancing or limiting the synergies can be mentioned:

Factors enhancing synergies	Factors inhibiting synergies
<ul style="list-style-type: none">● Scientists are cost effective● Centralised information diffusion, advice and training for both H2020 and ESIF● Use of English language● Internationalised R&D actors● Necessity for FP7/H2020 financing● Consistency of SF policies and regular financing	<ul style="list-style-type: none">● Bureaucracy - controls● Other rules for participation of private universities and institutes – Distortion of competition● Lack of collaboration between business and academia● Budget restrictions

⁷ Constantinos Deltas is professor at the Department of Biological Sciences of the University of Cyprus.

⁸ "Bio-bank is essentially a very well organised and systematic collection of biological material, in the form of DNA, plasma, serum, urine, biopsies etc. accompanied and associated with medical techniques and procedures", (Deltas, 2015)

Cyprus has developed a series of modifications in the national selection, evaluation and monitoring procedures in order to meet EU specifications. This has created a more complex administrative environment for both application and evaluation procedures as well as for financial auditing. The R&D system is trying to adapt to this new environment but not always successfully. The Cyprus R&D system is now in a transition period in many ways. There is discussion on what will be the new role of RPF and its potential reorganisation. If its role is advanced, as it should be, then greater consistency of SF policies related to RTDI is expected and a more solid system could be established. Recent changes show that there will be a more intense focus on the provision of information concerning calls for all RTDI actors (NCP). Also universities and research institutes are already supported in order to move closer to the market and support the exploitation of their research results. Private Universities complain that they do not compete equally with the state ones due to the private nature that equals them with the status of a private firm, thus, requiring higher percentages of matching-funds. There is a lot of debate on that and arguments from both sides.

Starting from the previous year a discussion was initiated by the RPF in order to support high-ranking proposal submitted under H2020. The discussions must lead to a clear fast-tracking mechanism that should be officially established under RPF.

8 TAKE-UP OF PUBLIC SECTOR RESEARCH RESULTS

The exploitation of public sector research results is weak for two reasons. One is the low level of public R&D expenditure and the second is the medium technology level of the private sector. Cluster initiatives according to cluster observatory were identified in the areas of tourism, financial services and construction. It is easy to conclude that except for tourism the other two areas were severely hit by the crisis.

The Incubator scheme is frozen since 2007, due to serious doubts concerning their contribution to the national economy. There was a negative external evaluation that expressed the view that incubators could not attract private financing. Some incubators were closed; others are still in operation expecting a potential re-launch of an incubators policy. But this does not seem to be the case.

In addition, as pointed out in interviews performed by the author with university stakeholders, six liaison offices have been established in universities, which aim to bridge the gap between university research and the business sector. The scheme is called “BConnect” and is coordinated by the University of Cyprus. Until now, the scheme has mainly focused on students’ placement (courses and internships). At the beginning, the project had a broader scope. It aimed at bringing companies together with academics. However, it seems that academics did not respond adequately. There was too little interest from universities to be engaged with the local industry. In the future, it is expected that the project will focus on the organisation of “sandwich degrees”, where theory and practice in the industry will be offered to students. The idea would be to help academia shaping its degrees to target the needs of industry.

Recent policy analysis that is also documented in the national smart specialization strategy shows that there is a change of plans for the programming period 2014-2020. The Cyprus government plans to develop a National Technology Transfer Office infrastructure in order to enhance cooperation of private companies with labs, workshops and fast prototype facilities. Analysis has proven that the exploitation of research results through a network of offices in all R&D providers is something ‘too large’ for the country and the volume of the existing research output.

Another serious issue is the internal rules of the Universities, which are not very friendly towards start-up creation due to the fact that most of the internal regulations favour more teaching and R&D and less entrepreneurship. However, this seems to change recently through BConnect.

Currently, there is no tax related policy promoting R&D in Cyprus or fiscal incentives to promote research careers and no tax incentives are offered. Regarding tax incentives for stimulating intellectual property rights and patents, Cyprus introduced in May 2012 the Intellectual Property Rights Box (IP Box), namely a set of tax incentives for enhancing intellectual property rights. Amendments were introduced to the income tax laws that would apply to all categories of intellectual property.

9 COUNTRY TAILORED POLICY SUGGESTIONS

Cyprus is once again, after 2007, confronting the dilemma of reorganising the governance of the country's R&I system. The timing is appropriate as a new set of SF is ready to be active in the very near future.

The country seems to be recovering from the crisis and despite the fact that Innovation and R&D are not currently the issues at the top of the agenda of local policy makers. A lot of preparatory work has been performed lately.

Summarising in a set of suggestions, the issues relating to effective governance of SF and H2020 funds as well as the development of potential synergies, the following could be proposed:

1. The new ESIF budget is influenced by a number of conditionalities. One of them is the National Smart Specialisation Strategy of Cyprus. The strategy will influence in a way that more funds towards R&I will be channelled from various ESIF thematic targets (1, 2, 3, 4, and 8). The existing governance system is not ready to deal with any enlarged package of activities and needs to be supported or changed.
2. One of the major changes should be the ability to identify the role of each actor concerning the design and implementation of the policy. It is evident that a clear allocation of responsibilities should be made between the Ministry of Commerce and RPF as well as the role of the Ministry of Economy on issues relating to innovation in SMEs. Another one should be the coordination of R&I policies under ESIF with the priorities of the rural development programme and the maritime programme. The interfaces, strangely, are not visible until now although both funds will support innovation related measures.
3. Governance should be an on-going process concerning entrepreneurial discovery. This should be incorporated in the R&I system. The monitoring of the entrepreneurial discovery process should be linked with the NCP and should provide relevant information to the beneficiaries on the opportunities arising.
4. The high political importance that was given to R&I in the existing governance system is a little far from reality. There are specific reasons for that. When the political responsibility is assumed at presidential and ministerial level then the policy cannot be designed unless there is a secretariat or a chief scientist that gathers and compiles the information. This role was played by the RPF once as both advisory councils (national and scientific) did not provide any serious output. The easiest way to go forward unless radical changes take place is to provide RPF with more systematic responsibilities on gathering, documenting and analysing information for policy purposes.
5. Independently of any performance indicators, Cyprus spends little on R&D, enterprises even less, and the financing received from SF during the 2007-2013 period, was not significant. The development of the R&I system of the island concerning infrastructures and the hyper-density of qualified scientists has influenced this successful performance in both FP7 and Horizon. It is evident that large-scale H2020 projects could affect small economies, like Cyprus, more effectively than trying to satisfy research needs with fragmented financing from SF. Thus, the level of financing should be carefully examined when these two worlds are brought together in a case such as that of Cyprus.
6. Financing nearly successful proposals in H2020 by ESIF is already a practice since the beginning for Cyprus. Such financing is considered as long as it is in line with the smart specialisation priorities.
7. Public and private Universities should compete in an environment with more common rules. In a small country like Cyprus different rules lead to significant distortion in financing. .
8. Procedures and use of advanced tools and support are important. As mentioned before, in Cyprus, individual researchers and scientists have actually succeeded in performing this high level participation in FPs. It is time that all these people receive support in order to work more collaboratively under the priorities of Smart Specialisation and European Excellence. Such support implies the effort to simplify procedures and formulate solid information, networking and a training base hosted by RPF and EEN.
9. The solid links through national and international networks and procedures are the basis for this promising R&I system which is in the making. Capacity building and global networking is the main priority in order to test the ideas with wider audiences from the beginning. Then new product development and innovation will follow. Cyprus needs a technological rating and evaluation exercise to assess the research potential and create a basis for the development of the new national technology transfer office.

10 ABBREVIATIONS

CIP	Competitiveness and Innovation Framework programme 2007-2013
COSME	Competitiveness of Enterprises and Small and Medium-sized Enterprises 2014 -2020
CSC	Cyprus Scientific Council
DGEPCD	Directorate General for European Programmes, Coordination and Development
EAFRD	European Agricultural Fund for Rural Development
EEN	Enterprise Europe Network
EMFF	European Maritime and Fisheries Fund
ERDF	European Regional Development Fund
ESIF	European Structural & Investment Funds
ESM	European Stability Mechanism
FP7	Framework Programme 7
GDP	Gross Domestic Product
GVA	Gross Value Added
H2020	Horizon2020
ICT	Information and Communication Technologies
IMF	International Monetary Fund
JRC-IPTS	Joint Research Centre – Institute for Prospective Technologies Studies
NCIR	National Research and Innovation Council
NCP	National Contact Point
NCRITD	National Committee for Research, Innovation and Technological Development
OP	Operational Programme
PPS	Purchasing Power Standards
R&D	Research & Development
R&I	Research & Innovation
RPF	Research Promotion Foundation
RTDI	Research, Technology Development & Innovation

SF	Structural Funds
SME	Small Medium Enterprises

List of interviews

Alexis Onoufriou, Head of Research Service, Frederick University
 Anthos Shekeris, Acting Director, Research & Innovation Office, University of Nicosia
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